

REMARKS

Entry of the foregoing, re-examination and reconsideration of the subject matter identified in caption, as amended, pursuant to and consistent with 37 C.F.R. §1.112, and in light of the remarks which follow, are respectfully requested.

By the present amendments, claim 53 has been made to depend upon claim 46. Claims 24-58 remain pending in this application.

Rejection Under 35 U.S.C. §112, First Paragraph

Claims 24-58 stand rejected under 35 U.S.C. §112, first paragraph, for the reasons set forth in paragraph (1) of the Office Action. Reconsideration of this rejection is respectfully requested for at least the following reasons.

Applicants reiterate their previous position that the scope of the term "true trimer" would be readily apparent to those of ordinary skill in this art based on their review of the present disclosure and the knowledge possessed by those skilled in this art. The term "true trimer" is defined in column 5, lines 2-5 of U.S. Patent No. 6,492,456 and column 6, lines 40-43 of U.S. Patent No. 6,653,432. Thus, the term has a recognized meaning in this art.

For at least the above reasons, the §112, first paragraph rejection should be withdrawn. Such action is respectfully requested.

Rejection Under 35 U.S.C. §112, Second Paragraph

Claims 24-58 were rejected under 35 U.S.C. §112, second paragraph, for the reasons given in paragraph (2) of the Office Action. Reconsideration and withdrawal of this rejection are requested for at least the following reasons.

Applicants have previously pointed out that the term "derived isocyanate function" is defined on page 6, lines 20-22 of the specification. As such, those of ordinary skill in the art would be apprised of the scope of the claims. Applicants disagree that the definition is repugnant to any art recognized definition.

The Examiner comments that "it is unclear how n can have a value of 4." Applicants are unsure of the Examiner's position and request clarification. Why can't n be 4?

Regarding the objection to claim 45, Applicants respectfully disagree with the Examiner's position and maintain their view that the scope of claim 45 would be readily apparent to those skilled in this art when the claim is analyzed in light of the teachings of the prior art and the present disclosure as such would be interpreted by one possessing the ordinary level of skill in the pertinent art (In re Johnson, 194 USPQ 187,193).

In view of the above, the rejection based on 35 U.S.C. §112, second paragraph, should be withdrawn.

Rejection Over EP 649866

Claims 46-50, 53 and 54 were rejected under 35 U.S.C. §102(b) as anticipated by

EP 649866 from the reasons given in paragraphs (4) and (5) of the Office Action.

Reconsideration of this rejection is respectfully requested in light of the following remarks and the attached Declaration.

Applicants disagree with the Examiner's conclusion that this document discloses polyisocyanates having an allophanate group content as set forth in the rejection claims. In the reference, the trimerization reaction and the allophanate reaction are conducted concomitantly as opposed to the procedure of the present invention. Moreover, EP '866 discloses on page 6, lines 7-12 that the kinetics of the trimerization reaction and the allophanatization reaction are different. It necessarily follows that the allophanate groups are formed well before the desired degree of trimerization is reached. Specifically, the disclosure of the reference makes it quite clear that the allophanates are formed initially and react thereafter in a trimerization reaction leading to tricondensate allophanates which are not desired in the present invention. Note the discussion on page 3, lines 9-20 of the specification.

Applicants note that the viscosities appearing in Table 1 on page 9 of EP '866 are measured after the obtained isocyanate composition has been dissolved in a 70% ratio into MPA (1-methoxy-2-propylacetate) thus rendering it difficult to compare with the viscosities of the presently claimed compositions. The data in said Table 1 indicates that the allophanate contents in Examples 2-4 thereof are 8%, 7% and 9%, respectively. However, it is noted that, in EP 649866, the allophanate amount is calculated as weight percent of allophanate functions (see page 3, line 6: "berechnet als $C_2HN_2O_3$, Molekulargewicht =

101"). In the present invention, the 10% maximum of tricondensate allophanates is calculated as a weight percentage of the allophanate compounds relative to the total mass of the composition (see page 22, line 33 to page 23, line 5 of the present application).

Accordingly, comparing the compositions of EP 649866 and those of the present invention is rather difficult.

With the above comments in mind, Applicants are submitting a Declaration by Dr. Bernard pursuant to 37 C.F.R. §1.132. The Declaration calculates the weight percent of tricondensate allophanates present in the products of Examples 2-4 of EP '866. These calculations are discussed in Appendix II of the Declaration. The results of these calculations prove that the content of tricondensate allophanates in the compositions of Examples 2-4 is actually 24.8%, 33.81% and 29.3%, respectively. These amounts are substantially higher than the maximum amounts set forth in the rejected claims.

Based on the above, the §102(b) rejection over EP 649866 should be reconsidered and withdrawn. Such action is earnestly requested.

Rejection Over Jacobs et al. or Potter et al.

Claims 53-57 have been rejected under 35 U.S.C. §102(b) as anticipated by U.S. Patent No. 5,258,482 to Jacobs et al. or U.S. Patent No. 5,235,018 to Potter et al. for the reasons given in paragraphs (6) and (7) of the Office Action.

Applicants do not necessarily agree with the Examiner's position regarding these rejections. However, to expedite prosecution, claim 53 has been currently amended to

depend upon claim 46. Since claim 46 was not rejected on this ground, it is clear that the §102(b) rejection of claims 53-56 over Jacobs et al. '482 or Potter et al. '018 has been obviated and should be withdrawn.

Rejections Over Potter et al. or Jacobs et al. or EP 649866

Claims 24-45, 51 and 52 were rejected under 35 U.S.C. §102(b) as anticipated by or, in the alternative, under 35 U.S.C. §103(a) as obvious over Potter et al. '018 or Jacobs et al. '482 or EP 649866 for the reasons expressed in paragraphs (9) and (10) of the Office Action. Reconsideration of these rejections is requested for at least the following reasons.

The data in Dr. Bernard's Declaration shows that the compositions disclosed in each of the cited documents contain allophanate tricondensates in amounts significantly above the 10 wt.% maximum set forth in the present claims. Regarding the Examiner's position that "it is by no means certain that the claims as drafted exclude the process of adding the allophanate by forming it in situ", Applicants submit that a distinguishing feature of this invention, which has been described in the disclosure and set forth in the claims, is that the trimerization and allophanatization reactions are conducted separately in order to minimize the production of undesirable allophanate tricondensates.

Further, the Examiner comments that "one would have expected that a decrease in viscosity would result from the simple admixture of the components, since it has long been known that the viscosity of a component can be reduced by adding a quantity of less viscous material." Respectfully, Applicants submit that this position is incorrect. In

column 3, lines 53-57 of Potter et al. '018, the process of blending the components is taught as equivalent to the process of simultaneously preparing the said components which thereby leads to compositions of comparable viscosities, which is not the case as shown in the attached Declaration.

Moreover, there is no suggestion in any of the cited references which would motivate the skilled artisan to select any one process over the other. It is to be noted that all the examples in the references employ processes where the components are simultaneously prepared. It was not obvious to separately add allophanate compounds to lower the viscosity of compositions containing isocyanate trimerization compounds. The discovery that tricondensate allophanate compounds have a detrimental effect on the viscosity of polyisocyanate compositions is neither disclosed nor suggested in the cited references.

For at least the above reasons and in view of the attached Declaration, the §102(b) and §103(a) rejections over Potter et al. '018, or Jacobs et al. '482, or EP '866 should be withdrawn.

Rejection Over Woynar et al.

Claims 24-26, 28-41 and 43-58 were rejected under 35 U.S.C. §103(a) as unpatentable over U.S. Patent No. 4,837,359 to Woynar et al. for reasons set forth in paragraphs (11) and (12) of the Office Action. Reconsideration and withdrawal of this rejection are requested for at least the reasons which follow.

Applicants respectfully disagree with the Examiner's position that their claims are drawn to biurets. The present claims are drawn to a process for preparing a tricondensate polyfunctional isocyanate composition by adding an allophanate to cyclocondensation products and the compositions prepared by said process. Compounds containing biuret structures are known to be present in various polyisocyanate compositions in addition to those disclosed in Woynar et al. '359. Applicants have indicated that the claimed compositions may contain biuret structures since these may be formed during the cyclotrimerization and/or allophanatization reaction.

Woynar et al. '359 simply discloses a process for the production of a polyisocyanate containing a biuret structure. There is no disclosure or suggestion in the reference of a process for preparing tricondensate polyfunctional isocyanate compositions as claimed herein. The teaching in the reference of possibly adding allophanate groups does not render obvious the presently claimed process or compositions.

Accordingly, the §103(a) rejection over Woynar et al. '359 should be withdrawn. Such action is earnestly solicited.

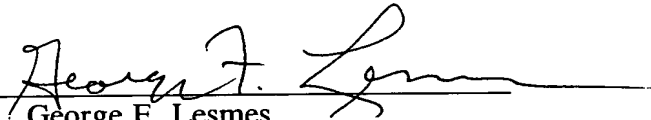
From the foregoing, further and favorable action in the form of a Notice of Allowance is believed to be next in order and such action is earnestly solicited. If there are any questions concerning this paper or the application in general, the Examiner is invited to telephone the undersigned at (703) 838-6683 at his earliest convenience.

Respectfully submitted,

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